

Claims

1. A method, comprising:

performing a read cycle that includes a destructive read operation and a write back operation; and

5 wherein the destructive read operation includes reading information from a first memory cell of a memory and wherein the write back operation includes writing the information read from the first memory cell to a second memory cell of the memory.

2. The method of claim 1, wherein reading information includes:

10 applying a read voltage across the first memory cell; and

determining the amount of charge released from the first memory cell to determine the logic state of the information stored in the first memory cell.

3. The method of claim 1, wherein writing the information includes applying a

15 write voltage across the second memory cell.

4. The method of claim 1, further comprising: delaying writing to the first memory cell for a predetermined amount of time .

5. The method of claim 4, wherein the another memory operation includes applying a first voltage having a first polarity across the first memory cell, wherein the first voltage is sufficient to switch the polarization of the first memory cell.

5 6. The method of claim 1, wherein the destructive read operation includes reading information from a first memory cell of a non-volatile polymer ferroelectric disk cache memory.

7. The method of claim 1, wherein writing the information includes writing the
10 information read from the first memory cell to a second memory cell if the second memory cell is blank.

8. The method of claim 7, wherein the write back operation further includes writing the information read from the first memory cell back to the first memory cell after
15 a predetermined amount of time has passed.

9. The method of claim 1, wherein the first memory cell is located in a first segment of the memory and the second memory cell is located in a second segment of the memory that is physically separated from the first segment.

10. An article comprising a storage medium having stored thereon instructions, that, when executed by a computing platform, result in: performing a read cycle that includes a destructive read operation and a write back operation, wherein the destructive read operation includes reading information from a first memory cell of a
5 memory and wherein the write back operation includes writing the information read from the first memory cell to a second memory cell of the memory.

11. The article of claim 10, wherein the instructions, when executed, further result in: delaying writing to the first memory cell for a predetermined amount of time.

10

12. The article of claim 10, wherein the destructive read operation includes reading information from a first memory cell of a non-volatile polymer ferroelectric disk cache memory and wherein writing the information includes writing the information read from the first memory cell to a second memory cell if the second memory cell is blank.

13. A method, comprising:

receiving a request to write information to a first location in a polymer memory;

and

writing the information to a second location in the polymer memory in response

5 to the request.

14. The method of claim 13, further comprising determining whether the second location is available and wherein the writing includes writing the information only to the second location in the polymer memory in response to the request.

10

15. The method of claim 13, wherein writing includes writing the information to the second location and not writing the information to the first location in response to the request if the second location is available.

15

16. The method of claim 13, wherein the first location is in a first array of the polymer memory and the second location is in a second array of the polymer memory, wherein the first array is physically separated from the second array.

17. The method of claim 13, wherein the polymer memory is a destructive
20 read ferroelectric memory, and the first location is in a first segment of the polymer memory and the second location is in a second segment of the polymer memory, wherein the first segment is physically separated from the second segment.

18. An apparatus, comprising:

a memory having at least two memory arrays; and

a memory controller coupled to the memory to perform a read cycle that includes
a destructive read operation and a write back operation, wherein the destructive read
5 operation includes reading information from a first memory cell of the memory and
wherein the write back operation includes writing the information read from the first
memory cell to a second memory cell of the memory.

19. The apparatus of claim 18, wherein the first and second memory cells are

10 ferroelectric memory cells comprising a non-volatile ferroelectric polymer material.

20. The apparatus of claim 19, wherein the non-volatile ferroelectric polymer
material comprises a polyvinyl fluoride, a polyethylene fluoride, a polyvinyl chloride, a
polyethylene chloride, a polyacrylonitrile, a polyamide, copolymers thereof, or

15 combinations thereof.

21. A system, comprising:

a disk memory;

a disk cache memory coupled to the disk memory; and

a memory controller coupled to the memory to perform a read cycle that includes

5 a destructive read operation and a write back operation, wherein the destructive read operation includes reading information from a first memory cell of the memory and wherein the write back operation includes writing the information read from the first memory cell to a second memory cell of the memory.

10 22. The system of claim 21, wherein the storage capacity of the disk cache memory is at least 500 megabytes and the storage capacity of the disk memory is at least one gigabyte.

15 23. The system of claim 21, wherein the disk cache memory is a non-volatile polymer memory.

24. The system of claim 21, wherein the disk cache memory is a non-volatile ferroelectric memory

20 25. The system of claim 21, wherein the first memory cell is located in a first array of the memory and the second memory cell is located in a second array of the memory that is physically separated from the first array.

26. A method, comprising:

receiving a request to write information to a first location in a ferroelectric memory; and

writing the information to a second location in the ferroelectric memory in

5 response to the request.

27. The method of claim 26, further comprising determining whether the second location is available and wherein the writing includes writing the information only to the second location in the ferroelectric memory in response to the request.

10

28. The method of claim 26, wherein writing includes writing the information to the second location and not writing the information to the first location in response to the request if the second location is available, wherein the first location is in a first array of the ferroelectric memory and the second location is in a second array of the ferroelectric memory, and wherein the first array is physically separated from the

15 second array.